

WHAT IS CLAIMED IS:

1. A welded wire lath comprising:

- 5           a) a plurality of generally parallel  
transverse wires lying primarily in a  
first plane and each departing from the  
first plane in a plurality of spaced-  
apart bent sections, each bent section  
defined between first and second  
shoulder regions;
- 10           b) a plurality of generally parallel first  
longitudinal wires lying generally in  
the first plane and intersecting with  
and attached to the transverse wires,  
the first longitudinal wires including,  
15           for each of the plurality of bent  
sections, a longitudinal wire attached  
to each of the transverse wires in at  
least one of the shoulder regions  
corresponding to the bent section; and,
- 20           c) a plurality of generally parallel second  
longitudinal wires lying generally in a  
second plane parallel to and spaced  
apart from the first plane, the second  
longitudinal wires attached to the bent  
25           sections of the transverse wires.

2. The wire lath of claim 1 comprising a barrier  
layer disposed between the first and second  
planes.

3. The wire lath of claim 2 wherein an angle  $\theta$   
between the portions of the transverse wires  
extending between one of the second  
longitudinal wires on one of the bent  
5 sections and the immediately adjacent first  
longitudinal wire attached to the shoulder  
portion corresponding to the bent section and  
a normal to the first plane is 30 degrees or  
less.

10 4. The wire lath of claim 2 wherein the barrier  
layer is perforated by apertures and the bent  
sections pass through the apertures.

15 5. The wire lath of claim 4 wherein the  
apertures are elongated and extend in a  
transverse direction.

20 6. The wire lath of claim 1 wherein at least  
some of the first longitudinal wires are non-  
round in cross section.

25 7. The wire lath of claim 6 wherein at least  
some of the first longitudinal wires are  
flattened and are oriented to lie generally  
in the first plane.

8. A welded wire lath comprising:

30 a) a plurality of generally parallel  
transverse wires lying primarily in a  
first plane and each departing from the

first plane in a plurality of spaced-apart bent sections, each bent section defined between first and second shoulder regions;

5       b) a plurality of generally parallel first longitudinal wires lying generally in the first plane and intersecting with and attached to the transverse wires, the first longitudinal wires including, 10 for each of the plurality of bent sections, a pair of longitudinal wires, one of the pair of longitudinal wires attached to each of the transverse wires in a first one of the shoulder regions 15 corresponding to the bent section and another one of the pair of longitudinal wires attached to each of the transverse wires in a second one of the shoulder regions corresponding to the bent 20 section; and,

c) a plurality of generally parallel second longitudinal wires lying generally in a second plane parallel to and spaced 25 apart from the first plane, the second longitudinal wires attached to the bent sections of the transverse wires.

9. The wire lath of claim 8 wherein the bent sections are generally V-shaped.

10. The wire lath of claim 9 wherein the second longitudinal wires are attached to the bent sections at points of the V-shaped bent sections.

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11. The wire lath of claim 9 wherein the bent sections have a height  $h$  and the pair of first longitudinal wires are spaced apart by a distance  $w$  with  $h \geq w$ .

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12. The wire lath of claim 8 wherein the bent sections are generally U-shaped.

13. The wire lath of claim 8 wherein the bent sections have a height  $h$  and the pair of first longitudinal wires are spaced apart by a distance  $w$  with  $h \geq w$ .

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14. The wire lath of claim 13 wherein angles  $\theta$  between the portions of the transverse wires extending between one of the second longitudinal wires on one of the bent sections and each of the pair of first longitudinal wires attached to the shoulder regions corresponding to the bent section and a normal to the first plane are each 30 degrees or less.

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15. The wire lath of claim 8 wherein at least some of the first longitudinal wires are non-round in cross section.

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16. The wire lath of claim 15 wherein at least some of the first longitudinal wires are flattened and are oriented to lie generally in the first plane.

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17. The wire lath of claim 8 comprising a barrier layer disposed between the first and second planes.

10 18. The wire lath of claim 17 wherein the bent sections are generally V-shaped.

15 19. The wire lath of claim 18 wherein the second longitudinal wires are attached to the bent sections at points of the V-shaped bent sections.

20 20. The wire lath of claim 19 wherein the bent sections have a height  $h$  and the pair of first longitudinal wires are spaced apart by a distance  $w$  with  $h \geq w$ .

25 21. The wire lath of claim 17 wherein the bent sections are generally U-shaped.

22. The wire lath of claim 17 wherein the bent sections have a height  $h$  and the pair of first longitudinal wires are spaced apart by a distance  $w$  with  $h \geq w$ .

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23. The wire lath of claim 8 wherein angles  $\theta$   
between the portions of the transverse wires  
extending between one of the second  
longitudinal wires on one of the bent  
5 sections and each of the pair of first  
longitudinal wires attached to the shoulder  
regions corresponding to the bent section and  
a normal to the first plane are each 30  
degrees or less.
- 10 24. The wire lath of claim 17 wherein the barrier  
layer is perforated by apertures and the bent  
sections pass through the apertures.
- 15 25. The wire lath of claim 24 wherein the  
apertures are elongated and extend in a  
transverse direction.
- 20 26. The wire lath of claim 17 wherein the barrier  
layer comprises an absorbent paper.
- 25 27. The wire lath of claim 17 wherein the barrier  
layer comprises a series of perforations  
which do not coincide with intersections of  
the longitudinal wires and transverse wires.
28. The wire lath of claim 27 wherein the  
perforations are round in shape.
- 30 29. The wire lath of claim 27 wherein the  
perforations are elongated.

30. The wire lath of claim 27 wherein the perforations comprise slits.

5 31. The wire lath of claim 17 comprising a backing layer adhesively affixed to the barrier layer, wherein the second longitudinal wires extend between the backing layer and the barrier layer.

10 32. The wire lath of claim 8 wherein at least some of the first longitudinal wires are non-round in cross section.

15 33. The wire lath of claim 32 wherein at least some of the first longitudinal wires are flattened and are oriented to lie generally in the first plane.

20 34. The wire lath of claim 33 wherein at least some of the first longitudinal wires are flattened and curved about a longitudinal axis wherein faces of the at least some first longitudinal wires which face away from the second plane are concave.

25 35. The wire lath of claim 17 comprising a plurality of spaced apart furring spacers on the transverse wires.

30 36. The wire lath of claim 8 wherein the bent sections are spaced apart along each of the

transverse wires at intervals of  
approximately 3 inches.

37. A building structure comprising:

- 5       a) a plurality of generally parallel  
          framing members;
- b) a wire lath attached to the framing  
          members, the wire lath comprising:
  - 10       i) a plurality of generally parallel  
          transverse wires lying primarily in  
          a first plane and each departing  
          from the first plane in a plurality  
          of spaced-apart bent sections, each  
          bent section defined between first  
15       and second shoulder regions;
  - ii) a plurality of generally parallel  
          first longitudinal wires lying  
          generally in the first plane and  
          intersecting with and attached to  
20       the transverse wires, the first  
          longitudinal wires including, for  
          each of the plurality of bent  
          sections, a pair of longitudinal  
          wires, one of the pair of  
25       longitudinal wires attached to each  
          of the transverse wires in a first  
          one of the shoulder regions  
          corresponding to the bent section  
          and another one of the pair of  
30       longitudinal wires attached to each  
          of the transverse wires in a second



one of the shoulder regions  
corresponding to the bent section;  
and,

5           iii)       a plurality of generally  
parallel second longitudinal  
wires lying generally in a  
second plane parallel to and  
spaced apart from the first  
plane, the second longitudinal  
10       wires attached to the bent  
sections of the transverse  
wires;

the wire lath oriented with the second  
longitudinal wires facing the framing  
15       members, each of the second longitudinal  
wires crossing a plurality of the framing  
members, and the first longitudinal wires  
spaced apart from faces of the framing  
members.

20       38. The building structure of claim 37 wherein  
the framing members and wire lath are on an  
underside of a part of a building.

25       39. The building structure of claim 38 comprising  
a barrier layer disposed between the first  
and second longitudinal wires.

30       40. The building structure of claim 39 comprising  
a layer of solidified stucco encasing the  
first longitudinal wires and at least

substantially filling a space between the barrier layer and the first longitudinal wires.

5    41. The building structure of claim 40 wherein the barrier layer comprises perforations and the solidified stucco extends through the perforations.

10   42. The building structure of claim 37 wherein the first longitudinal wires are flattened and are oriented with a wide dimension substantially parallel to faces of the framing members.

15    43. The building structure of claim 37 wherein the framing members are spaced apart by distances in excess of 12 inches and the wire lath is substantially unsupported in its  
20    portions between the framing members.